

REMARKS/ARGUMENTS

The rejections presented in the Office Action dated February 7, 2006 (hereinafter Office Action) have been considered. Claims 1-61 remain pending in the application. Reconsideration of the pending claims and allowance of the application in view of the present response is respectfully requested. Independent claims 1 and 39 have been amended to enhance an understanding of the claimed invention. Dependent claims 22-30, 32, and 33 have been amended to harmonize the dependent claims in view of the amendments to the independent claims or for formality reasons.

Claims 28-29 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form. Applicant thanks the Examiner for the indication of the allowability of claims 28-29.

Claim 22 stands rejected under 35 U.S.C. §112, second paragraph, as being indefinite. Claim 22 has been amended to remove a typographical error. This amendment was not made for reasons of patentability and does not narrow the scope of the claim.

Claims 1, 4, 6-9, 13-14, 16-21, 23, 33, 35-43, 47-56 and 58-60 stand rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 6,275,731 *Zhu* (hereinafter “Zhu”).

Applicant respectfully disagrees with the Examiner’s characterization of Zhu and the contention that Zhu anticipates these claims. Applicant respectfully asserts that several features recited in claims 1, 4, 6-9, 13-14, 16-21, 23, 33, 35-43, 47-56 and 58-60 are not disclosed in Zhu.

To anticipate a claim, the asserted reference must clearly and unequivocally disclose every element of the claimed invention. A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference. The identical invention must be shown in as complete detail as is contained in the claim. All claim elements, and their limitations, must be found in the prior art reference to maintain a rejection based on 35 U.S.C. §102.

Applicant’s invention, as set forth, for example in independent claims 1 and 39 is generally directed to systems and methods for capture detection involving sensing in

multiple classification windows that occur subsequent to the pacing pulse. Independent claims 1 and 39, as amended, include in some form establishing a first classification window which is subsequent to the pacing stimulation. A second classification window is established if a trigger characteristic of the cardiac signal is detected in the first classification window.

Zhu does not teach or suggest at least this claim limitation. Zhu describes pacing with a “prelook” period. The prelook period is established prior to the pacing pulse, not subsequent to the pacing pulse as in Applicant’s claims 1 and 39. The prelook period is described at col. 7, line 49-col. 8 line 6 of Zhu as follows: the controller enables an early detection threshold a predetermined time immediately before delivering the stimulation pulse. The controller then determines whether the amplitude of a portion of the electrogram signal received during the predetermined time immediately before delivering the stimulation pulse exceeds the early detection threshold. If the amplitude of the portion of the electrogram exceeds the early detection threshold, then delivery of the stimulation pulse is delayed. Zhu does not teach or suggest two or more classification windows that occur subsequent to delivery of the pacing pulse.

Zhu does not teach or suggest all of the claim limitations of Applicant’s independent claims 1 and 39. For at least these reasons, claims 1 and 39, and dependent claims 4, 6-9, 13-14, 16-21, 23, 33, 35-38, 40-43, 47-56 and 58-59, which depend from claims 1 or 39, are patentable over Zhu.

Claims 2-3 and 22 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Zhu.

Three criteria must be met to establish a *prima facie* case of obviousness. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference. Second, there must be a reasonable expectation of success. Finally, the prior art reference, or combination of references, must teach or suggest all the claim limitations. MPEP § 2142. Applicant respectfully traverses the rejection since the prior art fails to disclose all

the claim limitations and there would be no motivation to combine the references as proposed by the Examiner.

Regarding the rejection of claims 2-3, the Office Action states that it would have been obvious to modify Zhu to include the triggering of a second classification window.

Applicant respectfully disagrees. As previously set forth in arguments above, Zhu does not teach multiple classification windows that occur subsequent to the delivery of the pacing pulse. Thus, Zhu does not teach or suggest all of the claim limitations of claims 2-3 does not support a *prima facie* case of obviousness of these claims.

The Examiner states that triggering a second classification window would be an obvious matter of design choice and states that “Applicant has not disclosed that triggering one or more additional classification windows . . . provides an advantage, is used for a particular purpose or solves a stated problem.”

Applicant respectfully disagrees. First, it appears that the Examiner is impermissibly taking official notice that the elements of Applicant’s claims 2-3, in view of the Zhu and knowledge possessed by one skilled in the art, constitute facts outside of the record which are capable of instant and unquestionable demonstration as being well known or obvious to one skilled in the art. Allegations concerning specific knowledge of the prior art...should be supported and the applicant should be given the opportunity to challenge the correctness of such assertions and allegations. MPEP § 2144.03. Consistent with MPEP § 2144.03, Applicant respectfully requests evidence in support of the proposition that such teaching is well known in the prior art and that there is adequate evidence of motivation to combine this prior art with the main reference.

Second, Applicant disputes the Examiner’s assertion that a claim element is an obvious matter of design choice absent an explicit recitation of an advantage, use for a particular purpose or solution to a stated problem. It is not a requirement that Applicant provide in the specification an advantage for each limitation recited in the claims. Applicant is unaware of the Examiner’s authority for such a position and requests that the Examiner cite relevant statute, rule, or case law to support this assertion.

Third, although not required to do so, Applicant has provided a number of reasons why an additional classification window may be triggered. For example, page 27, lines 8-16 of the specification states that a classification window may be triggered if additional information is desired before making a response determination or if the cardiac signal is determined to be noisy.

Regarding the rejection of claim 22, the Office Action states “Zhu does not disclose expressly the triggering one or more additional classification windows if a back up pacing stimulation is delivered.” Applicant respectfully disagrees with the rejection of claim 22. It appears the Examiner is inappropriately taking official notice of triggering a classification window if a back up pacing stimulation is delivered. Consistent with MPEP § 2144.03, Applicant requests that the Examiner provide a reference that, in combination with Zhu, describes each and every limitation of claim 23 and any intervening claim, as well as a suggestion to combine the references in the manner suggested by the Examiner. Applicant reasserts arguments presented above regarding the lack of authority to reject a limitation as an obvious matter of design choice absent an explicit recitation of a particular advantage or use.

For at least the reasons discussed above, claims 2-3, and 22 are patentable over Zhu.

Claim 5 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Zhu in view of U.S. Patent No. 5,443,485 to *Housworth* (hereinafter “Housworth”). Claims 30, 34 and 57 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Zhu in view of U.S. Patent No. 5,443,485 to *Housworth* (hereinafter “Housworth”). Claims 15 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Zhu in view of U.S. Patent No. 6,512,953 to *Florio* (hereinafter “Florio”). Claims 24-27 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Zhu and Florio as applied to claim 15, and further in view of U.S. Patent No. 5,431,693 to *Schroeppel* (hereinafter “Schroeppel”). Claims 31-32 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Zhu and Florio as applied to claim 15, and further in view of Housworth.

In connection with each of the rejections listed above, Applicant respectfully contends that there is no suggestion or motivation to combine the references, and even

assuming *arguendo* that such combination was proper, the prior art references do not teach or suggest all of the claim limitations. Furthermore, Applicant respectfully asserts that the teachings of the asserted combinations would provide insufficient guidance for one of ordinary skill in the art having these references before him/her to make the combinations or modifications suggested by the Examiner.

For example, regarding the rejection of claims 30, 34, and 57, the combination of Zhu and Housworth do not teach or suggest all of the limitations of claim 30 as required to establish a *prima facie* case of obviousness. Neither Zhu nor Housworth teach or suggest classifying the cardiac response based on detection of morphological features with respect to detection regions of the classification windows as recited in claims 30, 34 and 57. Zhu, for example, does not teach classification windows subsequent to the pacing pulse as discussed more fully above and further does not teach or suggest detection regions of the classification windows. Neither Zhu nor Housworth teach detection of morphological features of the cardiac signal relative to detection regions. Housworth, for example, teaches integration of the signal in two time windows, but does not teach detection of morphological features. Housworth also is silent as to classifying the cardiac response as fusion/pseudofusion as recited in claim 30. Housworth further does not teach or suggest adaption of the detection regions as recited in claim 57.

As another example, the combination of Zhu, Florio, and Schroepel does not teach or suggest all of the limitations of claims 24-27.

Claim 24 is directed to classification of a non-captured response. As described in connection with the rejection of claim 1, classification of cardiac responses is based on detection of morphological features of the cardiac signal with respect to detection regions. The asserted combination of Zhu, Florio and Schroepel does not teach or suggest the detection regions and, therefore, the asserted combination does not support the case of *prima facie* obviousness.

Claims 25 and 26 recite defining a detection region in the first classification window and classifying the response as an intrinsic beat if the peak of the cardiac signal is detected in the detection region. The asserted combination of Zhu, Florio and Schroepel does not

teach detection regions. Thus, the asserted combination does not teach or suggest determining the intrinsic response based on a detection region of the first classification window as recited in claims 25 and 26.

Regarding the rejection of claim 27, the combination of references does not teach or suggest, among other limitations, the classification of fusion/pseudofusion beats based on detection of morphological features with respect to detection regions as recited in claim 27.

The asserted combinations of references do not teach all of the claim limitations of the rejected claims and do not provide the requisite motivation to combine or modify the references in the manner suggested, or any evidence of an expectation that any combination or modification would be successful at achieving Applicant's claimed invention. For at least these reasons, the rejected claims are patentable over the asserted combinations.

Claims 10-11 and 44-46 stand rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Publication No. 2004/0127950 by *Kim* (hereinafter "Kim") in view of Zhu. Claim 12 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Zhu in view of Kim.

Applicant respectfully brings to the Examiner's attention that Kim is not a qualified reference under 35 U.S.C. § 102 and, therefore, is not available under 35 U.S.C. § 103. As such, Kim cannot properly be used as a reference to support the Examiner's rejection of claims 10-12 and 44-46 under 35 U.S.C. § 103.

Both the instant application and Kim are assigned to a common assignee. Applicant makes reference to the assignee of record information for the instant application recorded at reel 015172, frame 0871 to evidence such common ownership. The instant application 10/743,599 and Kim 2004/0127950 were, at the time the invention of the instant application 10/743,599 was made, owned by the same company.

Claim 60 is rejected under 35 U.S.C. §102(b) as being anticipated by Zhu. Claim 61 is rejected under 35 U.S.C. §103(a) as being obvious over the combination of Zhu and Florio.

Regarding the rejections of claim 60 and 61, these claims include elements presented in means plus function format pursuant to 35 U.S.C. § 112, paragraph 6. Having

invoked 35 U.S.C. § 112, paragraph 6, the Examiner is compelled to construe claims 60 and 61 in a manner required by this statute. MPEP § 2181 and Federal Circuit case law make clear that:

“The plain and unambiguous meaning of paragraph six is that one construing mean-plus-function language in a claim must look to the specification and interpret that language in light of the corresponding structure, material, or acts described therein, and equivalents thereto, to the extent that the specification provides such disclosure. Paragraph six does not state or even suggest that the PTO is exempt from this mandate, and there is no legislative history indicating that Congress intended that the PTO should be.” *In re Donaldson*, 16. F.3d 1189, 1193 (Fed. Cir. 1994).

In order to establish anticipation of claim 60 or obviousness of claim 61, the asserted reference or combination of references must teach or suggest all the limitations of the claims. In particular, the reference or combination must teach or suggest the identical function recited in the means plus function elements of the claims 60. If identity of function is not found or suggested by the asserted references or combination, anticipation or obviousness is not established and the second step in the analysis need not be performed. Assuming that identity of function can be established for the means plus function element, the corresponding structure that implements the recited function must also be taught or suggested in the asserted reference. Absent this showing, anticipation of claim 60 and obviousness of claim 61 cannot be sustained.

For example, the Examiner has not identified where in the asserted references all functions recited in Applicant’s means-plus-function elements are found. The Examiner has further failed to identify structure, material or acts in the asserted references that correspond to the means that perform the recited functions in each of Applicant’s means-plus-function elements. A finding of anticipation or obviousness can not be established based on the Examiner’s incomplete patentability analysis of Applicant’s claimed subject matter.

Applicant respectfully asserts that claims 60 and 61 have not been properly construed pursuant to 35 U.S.C. § 112, paragraph 6 and that patentable weight has not been

given to each of the means-plus-function elements in Applicant's claims. Respectfully, the Examiner's bases for rejecting the pending claims are in error.

When claims 60 and 61 are properly construed under 35 U.S.C. § 112, paragraph 6, none of the prior art references, alone or in combination, asserted by the Examiner teach or suggest the combination of elements recited in Applicant's claims 60 and 61. Applicant reiterates the previously made arguments concerning each of the rejections, and that the pending claims are allowable over the asserted references.

It is to be understood that Applicant does not acquiesce to Examiner's characterization of the asserted art or Applicant's claimed subject matter, nor of the Examiner's application of the asserted art or combinations thereof to Applicant's claimed subject matter. Moreover, Applicant does not acquiesce to the Examiner's statements or conclusions concerning what would have been obvious to one of ordinary skill in the art, obvious design choices, common knowledge at the time of Applicant's invention, officially noticed facts, and the like. Applicant reserves the right to address in detail the Examiner's characterizations, conclusions, and rejections in future prosecution.

Authorization is given to charge Deposit Account No. 50-3581 (GUID.142PA) any necessary fees for this filing. If the Examiner believes it necessary or helpful, the undersigned attorney of record invites the Examiner to contact her to discuss any issues related to this case.

Respectfully submitted,

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